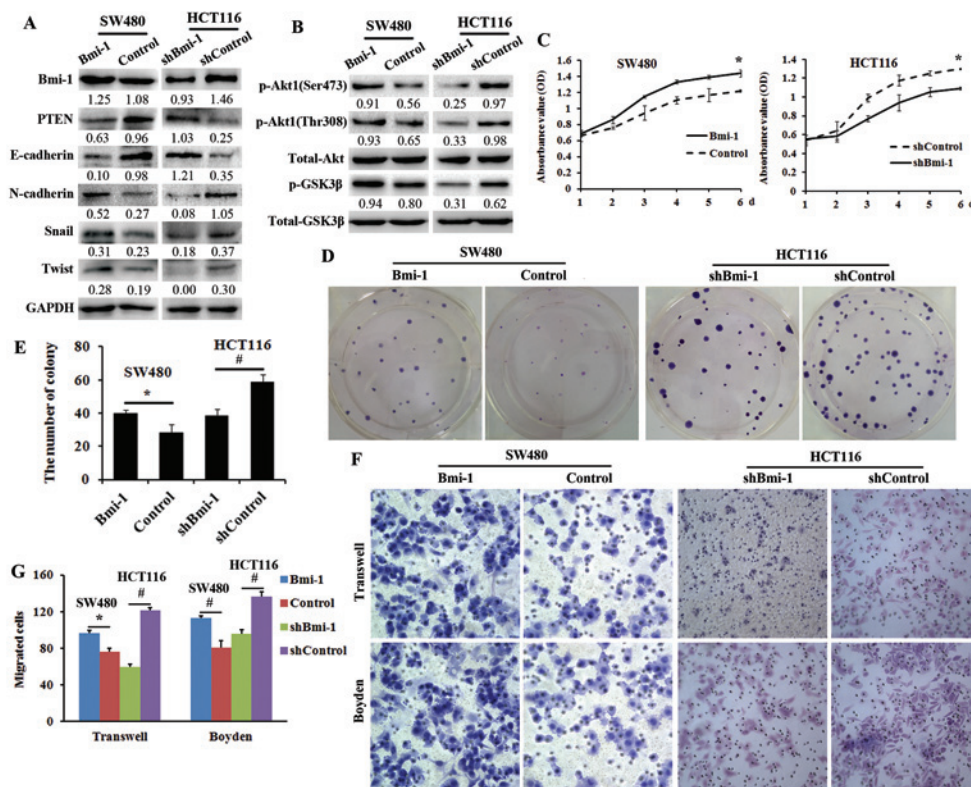
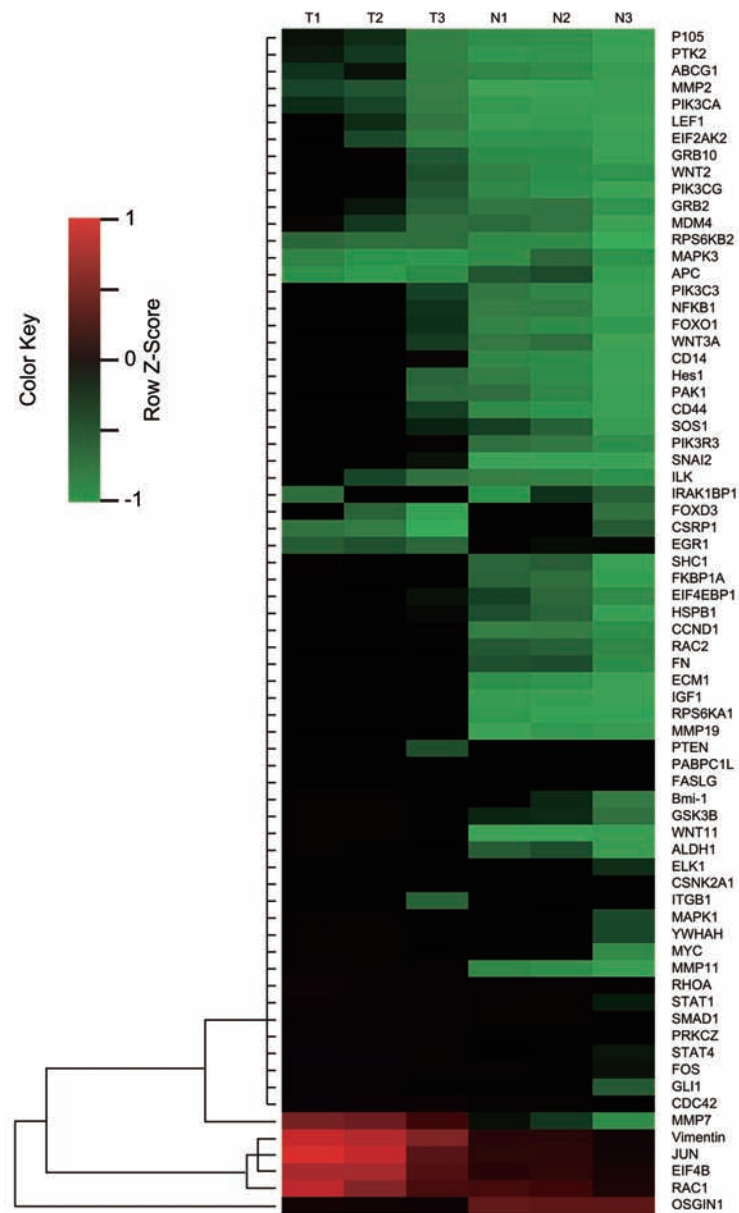


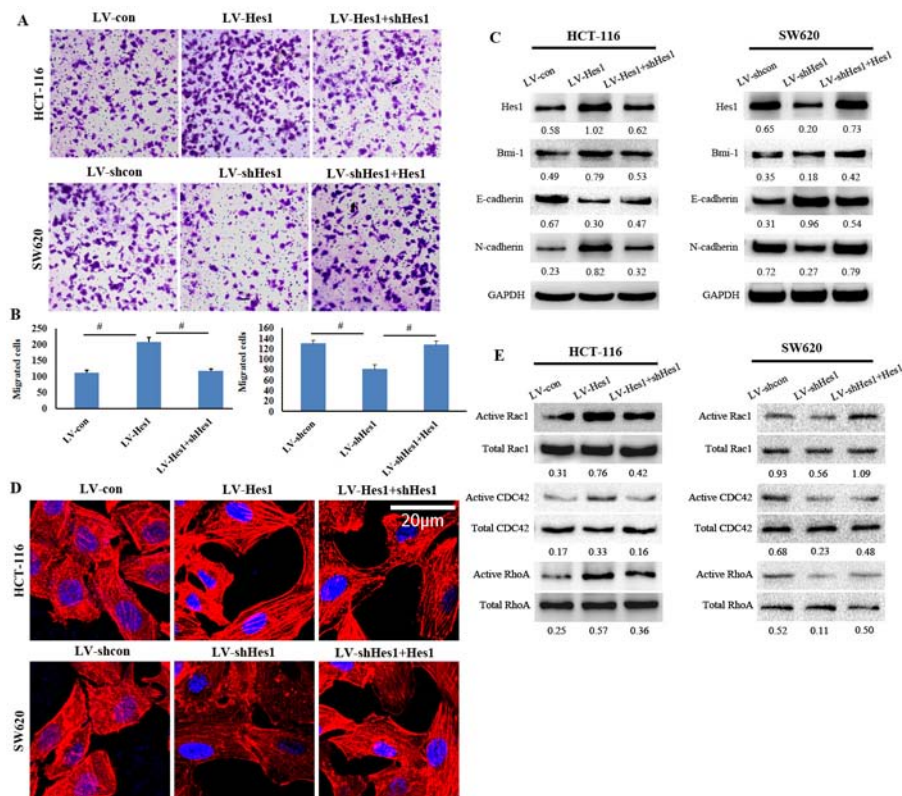
SUPPLEMENTARY FIGURES AND TABLE



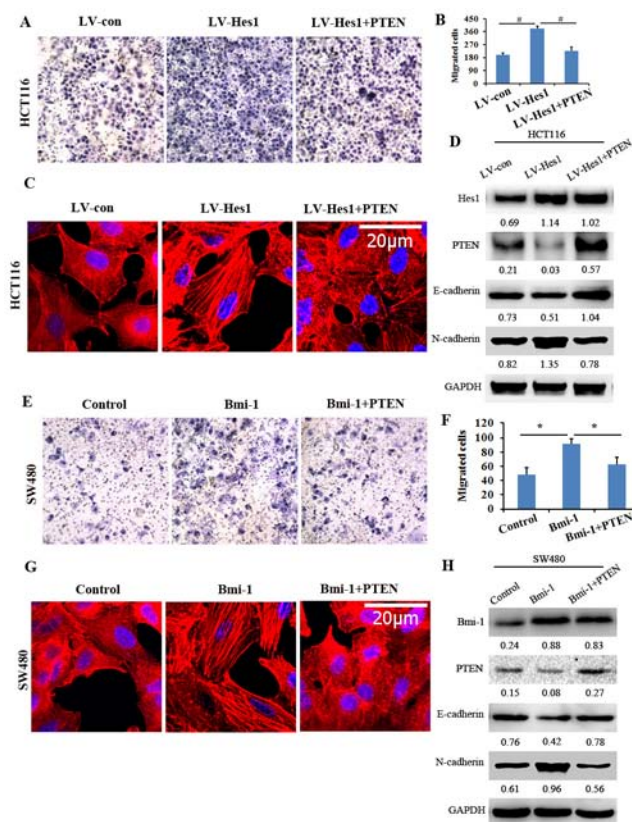
Supplementary Figure S1: Effect of Bmi-1 on cell proliferation and migration. **A.** Effect of Bmi-1 on the expression of EMT-related genes in colon cancer cells by western blot. **B.** Effect of Bmi-1 on Akt and GSK3 β activation in colon cancer cells showed by western blot. **C.** Effect of Bmi-1 over-expression or inhibition on colon cancer cell growth by MTT assay. **D, E.** Effect of Bmi-1 on colon cancer cell growth by colony formation assay. **F, G.** Effect of Bmi-1 on cell migration detected by Transwell and Boyden assay. Original magnification, $\times 200$. * $P < 0.05$, # $P < 0.01$ compared with control.



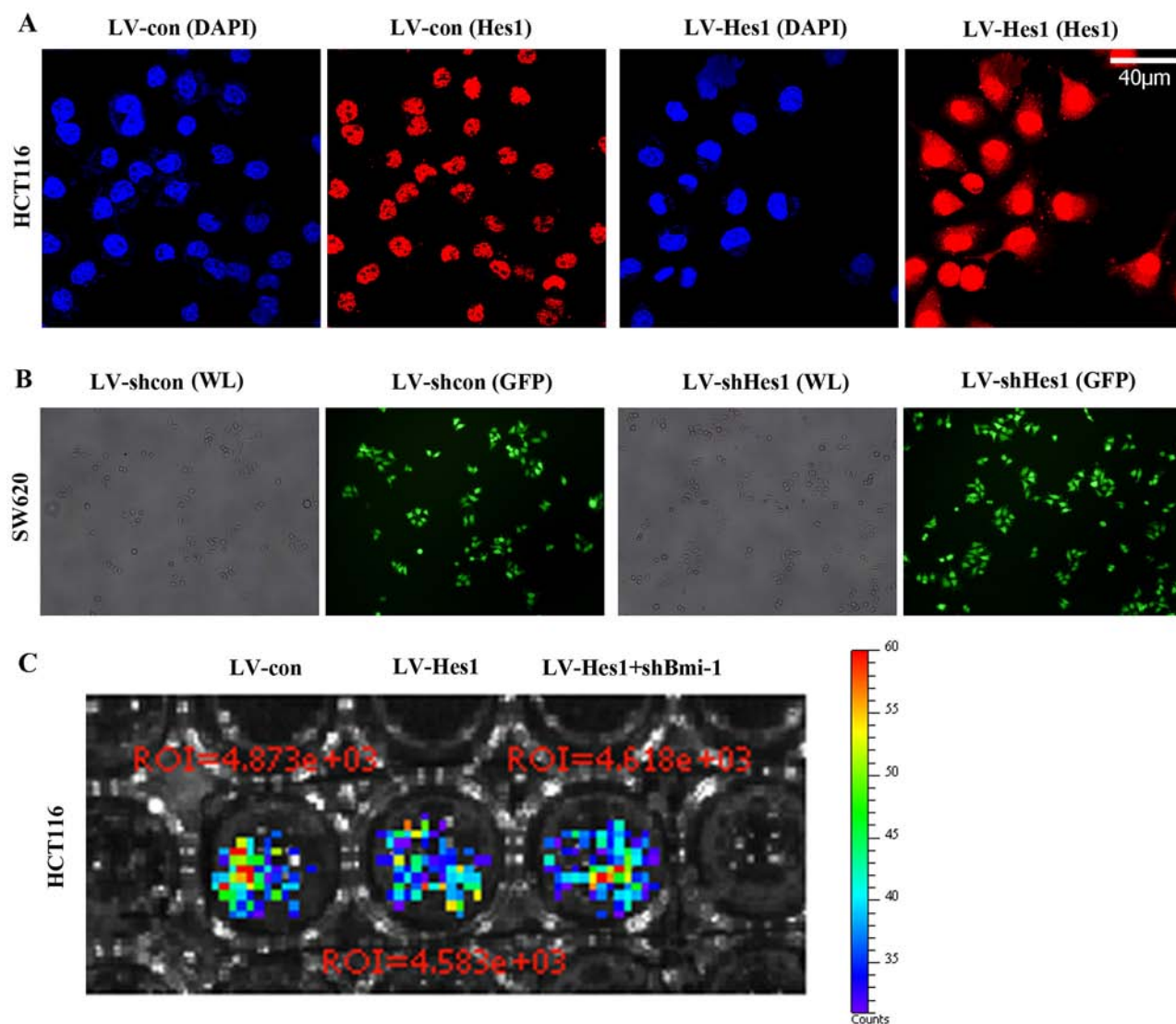
Supplementary Figure S2: Expression of genes in colon cancer biopsy samples and control normal samples detected by Microarray.



Supplementary Figure S3: Knockdown of overexpressed Hes1 by siRNA reduced the effects induced by Hes1, while transfection of RNAi-resistant Hes1 constructs recover the defects observed in shHes1-expressing cells. A, B. Cell migration. Original magnification, $\times 200$. $*P < 0.05$, $^{#}P < 0.01$ compared with control. **C.** Cadherin expression. **D.** Cytoskeletal organization. **E.** Rho GTPase activation.



Supplementary Figure S4: PTEN mediated Hes1 and Bmi-1 induced EMT, cell invasion and cytoskeleton reorganization. A, B. PTEN mediated Hes1-induced cell invasion. Original magnification, $\times 200$. * $P < 0.05$, # $P < 0.01$ compared with control. C. PTEN mediated Hes1-induced cytoskeleton reorganization. D. PTEN mediated Hes1-induced EMT using Western blot. E, F. PTEN mediated Bmi-1-induced cell invasion. Original magnification, $\times 200$. * $P < 0.05$, # $P < 0.01$ compared with control. G. PTEN mediated Bmi-1-induced cytoskeleton reorganization. H. PTEN mediated Bmi-1-induced EMT using Western blot.



Supplementary Figure S5: Stable cell line establishment. **A.** Expression of Hes1 in Hes1-overexpressing HCT116 cells detected by Immunofluorescence. **B.** GFP of shcon and shHes1 plasmid vectors in SW620 cells. Original magnification, $\times 100$. $*P < 0.05$, $^{\#}P < 0.01$ compared with control. **C.** Signal of luciferase in Hes1-overexpressing HCT116 cells and Bmi-1-silencing Hes1-overexpressing HCT116 cells, as well as GFP of “LV-Hes1+shBmi-1” cells. WL: white light; GFP: The green fluorescent protein.

Supplementary Table S1: Primers used in qPCR

Gene	Forward primer (5'-3')	Reverse primer (5'-3')
Hes1	ACGTGCGAGGGCGTTAATAC	GGGGTAGGTCATGGCATTGA
Bmi-1	CGTGTATTGTTTCGTTACCTGGA	TTCAGTAGTGGTCTGGTCTTGT
PTEN	TGGATTTCGACTTAGACTTGACCT	GGTGGGTTATGGTCTTCAAAAGG
E-cadherin	TGCCCAGAAAATGAAAAAGG	GTGTATGTGGCAATGCGTTC
N-cadherin	ACAGTGGCCACCTACAAAGG	CCGAGATGGGGTTGATAATG
Vimentin	GACGCCATCAACACCGAGTT	CTTTGTCGTTGGTTAGCTGGT
Snail	TCGGAAGCCTAACTACAGCGA	AGATGAGCATTGGCAGCGAG
Twist	GTCCGCAGTCTTACGAGGAG	GCTTGAGGGTCTGAATCTTGCT